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to include new gases, tools, or processes not included in the existing data set (i.e. gases, tools, or processes for which no data are currently available).

(6) The Administrator will review the reports within 120 days and will notify you of a determination whether it is necessary to update any default utilization and by-product formation rates and/or destruction or removal efficiency values. If the Administrator determines it is necessary to update default utilization and by-product formation rates and/or destruction or removal efficiency values, you will then have 180 days from the date you receive notice of the determination to execute the data collection and analysis plan described in the report and submit those data to the Administrator.

[75 FR 74818, Dec. 1, 2010, as amended at 77 FR 10381, Feb. 22, 2010; 78 FR 68215, Nov. 13, 2013; 78 FR 71954, Nov. 29, 2013]

§ 98.97 Records that must be retained.

In addition to the information required by § 98.3(g), you must retain the following records:

(a) All data used and copies of calculations made as part of estimating gas consumption and emissions, including all spreadsheets.

(b) [Reserved]

(c) Documentation for the fab-specific engineering model used to apportion fluorinated GHG and N₂O consumption. This documentation must be part of your site GHG Monitoring Plan as required under § 98.3(g)(5). At a minimum, you must retain the following:

(1) A clear, detailed description of the fab-specific model, including how it was developed; the quantifiable metric used in the model; all sources of information, equations, and formulas, each with clear definitions of terms and variables; all apportioning factors used to apportion fluorinated GHG and N₂O; and a clear record of any changes made to the model while it was used to apportion fluorinated GHG and N₂O consumption across process sub-types, process types, tools with and without abatement systems, stack systems, and/or fabs.

(2) Sample calculations used for developing the gas apportioning factors (f_{ij}) for the two fluorinated GHGs used at your facility in the largest quan-

ties, on a mass basis, during the reporting year.

(3) If you develop apportioning factors through the use of direct measurement according to § 98.94(c)(3), calculations and data used to develop each gas apportioning factor.

(4) Calculations and data used to determine and document that the fab was operating at representative operating levels, as defined in § 98.98, during the apportioning model verification specified in § 98.94(c).

(d) For all abatement systems through which fluorinated GHGs or N₂O flow at your facility, and for which you are reporting controlled emissions, the following in paragraphs (d)(1) to (9) of this section:

(1) Records of the information in paragraphs (d)(1)(i) through (iv) of this section:

(i) Documentation to certify that each abatement system or group of abatement systems is installed, maintained, and operated in accordance with the site maintenance plan for abatement systems that is specified in paragraph (d)(9) of this section.

(ii) Documentation from the abatement system supplier describing the abatement system's designed purpose and emission control capabilities for fluorinated GHG and N₂O for which the systems or group of systems is certified to abate, where available.

(iii) If you use default destruction or removal efficiency values in your emissions calculations under § 98.93(a), (b), and/or (i), certification that the abatement systems for which emissions are being reported were specifically designed for fluorinated GHG and N₂O abatement, as required under § 98.94(f)(3), and certification that the site maintenance plan includes manufacturer's recommendations and specifications for installation, operation, and maintenance for all applicable abatement systems.

(iv) Certification that you have included and accounted for all abatement systems and any respective downtime in your emissions calculations under § 98.93(i)(3), as required under § 98.94(f)(3).

(2) Abatement system calibration and maintenance records.

(3) Where the default destruction or removal efficiency value is used, documentation from the abatement system supplier describing the equipment's designed purpose and emission control capabilities for fluorinated GHG and N₂O.

(4) Where properly measured site-specific destruction or removal efficiencies are used to report emissions, the information in paragraphs (d)(4)(i) through (vi) of this section:

(i) Dated certification by the technician who made the measurement that the destruction or removal efficiency is calculated in accordance with methods in EPA 430-R-10-003 (incorporated by reference, see § 98.7) and, if applicable Appendix A of this subpart, or an alternative method approved by the Administrator as specified in § 98.94(k), complete documentation of the results of any initial and subsequent tests, the final report as specified in EPA 430-R-10-003 (incorporated by reference, see § 98.7) and, if applicable, the records and documentation specified in Appendix A of this subpart including the information required in paragraph (b)(7) of Appendix A of this subpart, or a final report as specified in an alternative method approved by the Administrator as specified in § 98.94(k).

(ii) The average destruction or removal efficiency of the abatement systems operating during the reporting year for each process type and gas combination.

(iii) A description of the calculation used to determine the average destruction or removal efficiency for each process type and gas combination, including all inputs to the calculation.

(iv) The records of destruction or removal efficiency measurements for abatement systems for all tests that have been used to determine the site-specific destruction or removal efficiencies currently being used.

(v) A description of the method used for randomly selecting abatement systems for testing.

(vi) The total number of systems for which destruction or removal efficiency was properly measured for each process type and gas combination for the reporting year.

(5) In addition to the inventory specified in § 98.96(p), the information in

paragraphs (d)(5)(i) through (iii) of this section:

(i) The number of abatement systems of each manufacturer, and model numbers, and the manufacturer's claimed fluorinated GHG and N₂O destruction or removal efficiency, if any.

(ii) Records of destruction or removal efficiency measurements over the in-use life of each abatement system.

(iii) A description of the tool, with the process type or sub-type, for which the abatement system treats exhaust.

(6) Records of all inputs and results of calculations made accounting for the uptime of abatement systems used during the reporting year, in accordance with Equations I-15 or I-23 of this subpart, as applicable. The inputs should include an indication of whether each value for destruction or removal efficiency is a default value or a measured site-specific value.

(7) Records of all inputs and results of calculations made to determine the average weighted fraction of each gas destroyed or removed in the abatement systems for each stack system using Equation I-24 of this subpart, if applicable. The inputs should include an indication of whether each value for destruction or removal efficiency is a default value or a measured site-specific value.

(8) Records of all inputs and the results of the calculation of the facility-wide emission destruction or removal efficiency factor calculated according to Equations I-26, I-27, and I-28 of this subpart.

(9) A site maintenance plan for abatement systems, which must be maintained on-site at the facility as part of the facility's GHG Monitoring Plan as described in § 98.3(g)(5), and be developed and implemented according to paragraphs (d)(9)(i) through (iii) of this section.

(i) The site maintenance plan for abatement systems must be based on the abatement system manufacturer's recommendations and specifications for installation, operation, and maintenance if you use default destruction and removal efficiency values in your emissions calculations under § 98.93(a), (b), and/or (i). If the manufacturer's recommendations and specifications

for installation, operation, and maintenance are not available, you cannot use default destruction and removal efficiency values in your emissions calculations under § 98.93(a), (b), and/or (i). If you use an average of properly measured destruction or removal efficiencies determined in accordance with the procedures in § 98.94(f)(4)(i) through (vi), the site maintenance plan for abatement systems must be based on the abatement system manufacturer's recommendations and specifications for installation, operation, and maintenance, where available. If you deviate from the manufacturer's recommendations and specifications, you must include documentation that demonstrates how the deviations do not negatively affect the performance or destruction or removal efficiency of the abatement systems.

(ii) The site maintenance plan for abatement systems must include a defined preventative maintenance process and checklist.

(iii) The site maintenance plan for abatement systems must include a corrective action process that you must follow whenever an abatement system is found to be not operating properly.

(e) Purchase records for gas purchased.

(f) Invoices for gas purchases and sales.

(g) Documents and records used to monitor and calculate abatement system uptime.

(h) GHG Monitoring Plans, as described in § 98.3(g)(5), must be completed by April 1, 2011. You must update your GHG Monitoring Plan to comply with § 98.94(c) consistent with the requirements in § 98.3(g)(5)(iii).

(i) Retain the following records for each fab for which you elect to calculate fab-level emissions of fluorinated GHG using the procedures specified in § 98.93(i)(3) or (4).

(1) Document all stack systems with emissions of fluorinated GHG that are less than 10,000 metric tons of CO₂e per year and all stack systems with emissions of 10,000 metric tons CO₂e per year or more. Include the data and calculation used to develop the preliminary estimate of emissions for each stack system.

(2) For each stack system, identify the method used to calculate annual emissions; either § 98.93(i)(3) or (4).

(3) The identity and total annual consumption of each gas identified as an intermittent low use fluorinated GHG as specified in § 98.93(i)(4)(i) and defined in § 98.98.

(4) The emissions test data and reports (see § 98.94(j)(4)) and the calculations used to determine the fab-specific emission factor, including the actual fab-specific emission factor, the average hourly emission rate of each fluorinated GHG from the stack system during the test and the stack system activity rate during the test. The report must also contain any changes in the stack system configuration during or between tests in a reporting year.

(5) The fab-specific emission factor and the calculations and data used to determine the fab-specific emission factor for each fluorinated GHG and by-product, as calculated using Equations I-19 and I-20 of § 98.93(i)(3).

(6) Calculations and data used to determine annual emissions of each fluorinated GHG for each fab.

(7) Calculations and data used to determine and document that the fab was operating at representative operating levels, as defined in § 98.98, during the stack testing period.

(8) A copy of the certification that no significant changes in stack system flow configuration occurred between tests conducted for any particular fab in a reporting year, as required by § 98.94(j)(1)(iv) and any calculations and data supporting the certification.

(9) The number of tools vented to each stack system in the fab.

(j) If you report the approximate percentage of total GHG emissions from research and development activities under § 98.96(x), documentation for the determination of the percentage of total emissions of each fluorinated GHG and/or N₂O attributable to research and development activities, as defined in § 98.6.

(k) Annual gas consumption for each fluorinated GHG and N₂O as calculated in Equation I-11 of this subpart, including where your fab used less than 50 kg of a particular fluorinated GHG or N₂O used at your facility for which you have not calculated emissions using

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Equations I-6, I-7, I-8, I-9, I-10, I-21, or I-22 of this subpart, the chemical name of the GHG used, the annual consumption of the gas, and a brief description of its use.

(l) All inputs used to calculate gas consumption in Equation I-11 of this subpart, for each fluorinated GHG and N₂O used.

(m) Annual amount of each fluorinated GHG consumed for process sub-type, process type, stack system, or fab, as appropriate, and the annual amount of N₂O consumed for the aggregate of all chemical vapor deposition processes and for the aggregate of all other electronics manufacturing production processes, as calculated using Equation I-13 of this subpart.

(n) Disbursements for each fluorinated GHG and N₂O during the reporting year, as calculated using Equation I-12 of this subpart and all inputs used to calculate disbursements for each fluorinated GHG and N₂O used in Equation I-12 of this subpart, including all fab-wide gas-specific heel factors used for each fluorinated GHG and N₂O. If your fab used less than 50 kg of a particular fluorinated GHG during the reporting year, fab-wide gas-specific heel factors do not need to be reported for those gases.

(o) Fraction of each fluorinated GHG or N₂O fed into a process sub-type, process type, stack system, or fab that is fed into tools connected to abatement systems.

(p) Fraction of each fluorinated GHG or N₂O destroyed or removed in abatement systems connected to process tools where process sub-type, process type j is used, or to process tools vented to stack system j or fab f.

(q) All inputs and results of calculations made accounting for the uptime of abatement systems used during the reporting year, or during an emissions sampling period, in accordance with Equations I-15 and/or I-23 of this subpart, as applicable.

(r) For fluorinated heat transfer fluid emissions, inputs to the fluorinated heat transfer fluid mass balance equation, Equation I-16 of this subpart, for each fluorinated heat transfer fluid used.

(s) Where missing data procedures were used to estimate inputs into the

fluorinated heat transfer fluid mass balance equation under § 98.95(b), the estimates of those data.

[75 FR 74818, Dec. 1, 2010, as amended at 78 FR 68218, Nov. 13, 2013]

§ 98.98 Definitions.

Except as provided in this section, all of the terms used in this subpart have the same meaning given in the Clean Air Act and subpart A of this part. If a conflict exists between a definition provided in this subpart and a definition provided in subpart A, the definition in this subpart takes precedence for the reporting requirements in this subpart.

Abatement system means a device or equipment that is designed to destroy or remove fluorinated GHGs or N₂O in exhaust streams from one or more electronics manufacturing production processes, or for which the destruction or removal efficiency for a fluorinated GHG or N₂O has been properly measured according to the procedures under § 98.94(f)(4), even if that abatement system is not designed to destroy or remove fluorinated GHGs or N₂O. The device or equipment is only an abatement system for the individual fluorinated GHGs or N₂O that it is designed to destroy or remove or for the individual fluorinated GHGs or N₂O for which destruction or removal efficiencies were properly measured according to the procedures under § 98.94(f)(4).

Actual gas consumption means the quantity of gas used during wafer/substrate processing over some period based on a measured change in gas container weight or gas container pressure or on a measured volume of gas.

By-product formation means the creation of fluorinated GHGs during electronics manufacturing production processes or the creation of fluorinated GHGs by an abatement system. Where the procedures in § 98.93(a) are used to calculate annual emissions, by-product formation is the ratio of the mass of the by-product formed to the mass flow of the input gas. Where the procedures in § 98.93(i) are used to calculate annual emissions, by-product formation is the ratio of the mass of the by-product formed to the total mass flow of all fluorinated GHG input gases.